load resistance of the antenna and in that the thermometric component is electrically insulated from the load resistance of the antenna.

13. (New) The bolometric detector according to claim 12, wherein the thermometric component is a diode.

14. (New) The bolometric detector according to claim 13, wherein the receiving antenna comprises four metal separate components arranged in a shape of a cross around a central portion so that a first two metal components are aligned along a first axis and a second two metal components are aligned according to an axis perpendicular to the first axis, wherein the metal components are arranged on a silicon layer, the silicon layer has, at a central portion, a recess so that diode is hung above a silicon substrate, in that it comprises means for hanging the diode comprising at least a set of two metal arms, wherein a first metal arm is connected to a first metal component and a second metal arm is connected to the metal component which is aligned with the first metal component.

15. (New) The bolometric detector according to claim 14, wherein the receiving antenna, the diode which comprises the thermometric component, and the means for hanging the diode, define, as seen from above, an occupied space with a square shape, wherein a side of the square has a length substantially equal to one half of the wavelength of the detected wave.

16. (New) An imaging device comprising at least a bolometric detector, wherein the bolometric detector is a detector according to claim 12.

17. (New) The imaging device according to claim 16, further comprising at least a set of four bolometric detectors arranged side by side and the diodes of which are mounted in parallel.

18. (New) The imaging device according to claim 16, further comprising at least a set of four bolometric detectors arranged side by side and the diodes of which are mounted in parallel, two first bolometric detectors for collecting TE waves and two second bolometric detectors for collecting TM waves, wherein diodes of the first two bolometric detectors are associated according to a first parallel circuit and diodes of the second two bolometric detectors are associated according to a second parallel circuit.

19. (New) The imaging device according to claim 18, wherein each bolometric detector comprises a second diode placed in a vicinity of a diode which forms the thermometric component, wherein each second diode enables all or part of parasitic signals received by the bolometric detector to be removed through differential readout of the signals which it generates and of signals derived from diode.

20. (New) A method for manufacturing a bolometric detector comprising a receiving antenna and a thermometric component, comprising the following steps:

a step for producing a structure formed by stacking of a silicon substrate, an oxide layer, and a silicon layer grown by epitaxy,

a step for producing a doped area in the silicon layer in order to form the thermometric component as a diode and to cover the silicon layer with a silicon oxide layer,

a step for producing electric contacts of the diode,

a step for producing, by depositing a metal on the silicon oxide layer, metal components forming the receiving antenna,

a step of dry etching the oxide and the silicon layers in order to define a recessed area which localizes the diode,

a step of depositing a passivation layer and of etching the passivation layer in order to leave free access to the electric contacts of the diode and areas for recovering electric contact with the antenna metal components,

a step of depositing a conducting layer on the electric contacts of diode, on the areas for recovering electric contact with the antenna metal components and on the recessed area which localizes the diode, and

a step for removing the oxide located under the diode and under the recessed area which localizes the diode in order to create a cavity.

21. (New) Method for manufacturing a bolometric detector according to claim 20, comprising the further step of etching the silicon substrate under the antenna metal components.

IN THE ABSTRACT OF THE DISCLOSURE

Please delete the Abstract shown on Page 19.

Please insert a new Abstract on Page 19 as follows:

A bolometric detector including a receiving antenna for collecting electromagnetic waves and a resistive load for converting the power of electromagnetic waves into heating power. The resistive load is the load resistor of the antenna. Such a detector can particularly be applied to the detection of objects in "all-weather" conditions (rain, fog, smoke, etc).

REMARKS

Favorable consideration of this application, in view of the following comments and as presently amended, is respectfully requested.